

# ESTUARIES & COASTAL WETLANDS OF LAKE SUPERIOR

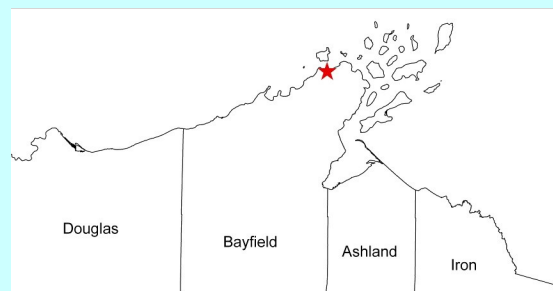
## Sand Bay

Approximate Size: 240 (wetland area: 200 acres)\*

Ownership: National Park Service/Red Cliff Band of Lake Superior Chippewa

Year Last Surveyed by WDNR/NHI: 2014

GLCWC Classification: Open Drowned River Mouth



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## Site Description

Located approximately 8 miles northwest of Red Cliff and 9 miles northeast of Cornecopia near the tip of the Bayfield Peninsula, the drowned mouth of the Sand River is situated in a complex of wetlands separated from Lake Superior by a forested sandspit. The lower portions of the Sand River are bordered by northern sedge meadow and alder thicket. West of the lagoon at the stream's outlet are several spring runs. East of the lagoon is a peatland with Poor Fen, Tamarack (poor) Swamp, and "northern shrub fen".

The Poor Fen occurs on both grounded and floating mat comprised of sedge and Sphagnum peat, and is dominated by bogbean (*Menyanthes trifolia*), wiregrass (*Carex lasiocarpa*), and sweet gale (*Myrica gale*). Insectivorous plants are common and Sphagnum is common but discontinuous. Numerous uncommon plants of northern fens also occur in the fen. The Northern Sedge Meadow is characterized by tussock sedge (*Carex stricta*), lake sedge (*C. lacustris*), and bluejoint grass (*Calamagrostis canadensis*), mixed with cat-tail (*Typha latifolia*) and scattered shrubs including speckled alder (*Alnus incana*), red-osier dogwood (*Cornus stolonifera*), and sweet gale. Where alder and sweet gale dominate, "northern shrub fen" may more accurately describe the community. Tamarack (poor) Swamp occurs in the east portion of the site, dominated by tamarack 4-6" in diameter and 30-40' tall. Red maple, speckled alder, and sweet gale are also common, along with scattered ericaceous shrubs.

A narrow forested beach ridge runs east and west of the river mouth, dominated by scattered supercanopy red and white pine, while a narrow band of sandy beach stretches over a mile along the coastline, fed by the site's namesake, the Sand River. Rocky headlands with significant outcroppings of sandstone cliffs occur on either side of Sand Bay. Most of the watershed is forested and undeveloped.

\*Acreages are rough estimates based on GIS and aerial photographs and do not reflect ownership or management boundaries.

## *Threats*

No non-native invasive plants were noted in 1997 or 2014 surveys; however surveys were not comprehensive. Across the Lake Superior clay plain, water quality and wetland function are known to be adversely affected by open lands (e.g., developed land, agriculture, young forest) and positively affected by older forests and conifers. Land use analysis of the watershed and associated water quality monitoring could facilitate better understanding of this site's aquatic and wetland resources. This site features one of the least disturbed of the coastal estuaries, and could serve as a reference site.

## *Additional Comments*

The site supports a diverse assemblage of plants, animals and communities including many rare species, and the Sand River, which enters Lake Superior at Sand Bay, supports regionally significant diversity of aquatic macroinvertebrates.

Survey work conducted in 2014 noted a significant shrub component in portions of the wetland dominated by alder and sweet gale; whether this is part of a stable “northern shrub fen” or a successional change resulting from a period of lower Lake Superior water levels is unknown, but long-term monitoring is warranted. In addition, many rare species occur here including some at the southern edge of their range; monitoring for impacts of climate change or water level change would be beneficial.

## *Abbreviations and Helpful References*

GLCWC - Great Lakes Coastal Wetland Classification.- [http://glc.org/wetlands/pdf/wetlands-class\\_rev1.pdf](http://glc.org/wetlands/pdf/wetlands-class_rev1.pdf)

Lake Superior Binational Program - <http://www.epa.gov/glnpo/lakesuperior/>

Red Cliff Band of Lake Superior Chippewa - <http://www.redcliff-nsn.gov/>

WDNR Coastal Wetlands webpages - <http://dnr.wi.gov>, Keyword: “coastal wetlands”

WDNR/NHI - Wisconsin Department of Natural Resources, Natural Heritage Inventory Program.  
<http://dnr.wi.gov> , Keyword: “natural heritage”

“Managing Woodlands on Lake Superior’s Red Clay Plain” - WDNR publication #PUB-FR-385 2007.  
<http://dnr.wi.gov>, Keyword: “bmp landowner guides”

## *Suggested Citation*

E.J. Epstein, A. Galvin, and W.A. Smith. 2002. Site Description for Sand Bay. Originally published In: "A Data Compilation and Assessment of Coastal Wetlands of Wisconsin’s Great Lakes." PUBL ER-803 2002. Updated by R.P. O’Connor in 2015. <http://dnr.wi.gov>, Keyword: "coastal wetlands sand bay"



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